

**AMENDMENTS TO THE SPECIFICATION:**

Please amend the Specification as follows:

In the TITLE:

METHOD AND APPARATUS USING DYNAMIC SQL FOR ITEM CREATE,  
RETRIEVE, UPDATE, OR DELETE OPERATIONS IN A CONTENT MANAGEMENT  
APPLICATION

[005] It would therefore be desirable to provide content management systems that can handle variations in user requests. It may also be desirable to provide content management systems with an efficient way to use dynamic SQL.

[024] Furthermore, resource manager **106** may also be configured to store multiple copies of objects on the same or a separate resource manager (not shown). Although Figure 1 shows a single resource manager, content management system **100** may include any number of resource managers. For example, content management system **100** may include multiple resource managers that are distributed across one or more networks.

[027] Application program **200** is program code that implements the functions and procedures ~~and~~ of library server **104**, such as communications with client **102** and resource manager **106** and operations with library server database **202**. Application program **200** may be written in a variety of host programming languages, such as C, C++, Java JAVA, or COBOL.

[029] Library server database **202** serves as a catalog for items stored by content management system **100**. In order to catalog a variety of items, library server database **202** may classify items according to an item type. An item type may serve as a template for consistently defining and locating like items. Item types may be predetermined by content management system **100** or custom built by a user. Library server database **202** may then create and store items as specific instances of item types. Objects associated with a particular item, such as a document, may then be indexed by library server database **202** and stored by resource manager **106**. For example, for an insurance business, library server database **202** may use an item type for insurance claims and policy holders. The item type specifies the format of the information, such as the policy holder name, address, and vehicle information. Each individual claim and policy holder would then be considered an item and indexed by library server database **202**. Documents corresponding to each individual claim, such as a fax, may then be stored as objects in resource manager **106**.

[032] Cursor packages **204** serve as an interface between application program **200**, embedded modules **206**, and library server database **202**. Cursor packages **204** may be useful because application program **200** may call one or more dynamic SQL statements in embedded modules **206** to retrieve data from library server database **202**. Library server database ~~20~~ **202** may then return data in the form of sets, e.g., one or more rows from a table, in response to the SQL statements in embedded modules **206**. However, application program **200** may use an application programming language that is normally not equipped to deal with data returned in sets. In order to pass data between embedded modules **206** and other components in application

program **200**, application program **200** may therefore use one or more cursors in cursor packages **204**.

[037] Library server ~~204~~ **104** may also include a cache **208** to improve its performance. Cache **208** may provide a temporary storage location for information that is frequently used by library server **104** and/or application program **200**. For example, application program **200** may store information from library server database **202**, such as information from summary table **210** or index table **212**, in cache **210**. Cache **210** may be implemented using memory installed within library server ~~204~~ **104**, such as a random access memory. The size of cache **210** may be configured by library server **104** based on user preference and operation conditions.

[049] Content database **302** manages and stores objects for content management system **100**. Content database **302** may be implemented using a variety of devices and software. For example, in one embodiment content database **302** may be implemented as a relational database, such as DB2<sup>®</sup> Universal Database<sup>™</sup>. In addition, content database **302** may use a variety of types of storage, such as can drive optical storage units, or magnetic disk drive.